

Title (en)  
PERFORATED SHEETS OF GRAPHENE-BASED MATERIAL

Title (de)  
LOCHBLECHE AUS GRAPHENBASIERTEM MATERIAL

Title (fr)  
FEUILLES PERFORÉES DE MATÉRIAU À BASE DE GRAPHÈNE

Publication  
**EP 3331816 A4 20190327 (EN)**

Application  
**EP 16833431 A 20160414**

Priority  
• US 201562201527 P 20150805  
• US 201562201539 P 20150805  
• US 2016027612 W 20160414

Abstract (en)  
[origin: CN107847835A] Sheets of graphene-based material comprising single layer graphene and suitable for formation of a plurality of perforations in the single layer graphene are provided. In an aspect, the sheets of graphene-based material are formed by chemical vapor deposition followed by one or more conditioning steps. In a further aspect, the sheets of graphene-based material include non-graphenic carbon-based material and may be characterized the amount, mobility and/or volatility of the non-graphenic carbon-based material.

IPC 8 full level  
**C01B 32/194** (2017.01); **B81B 1/00** (2006.01); **B82Y 30/00** (2011.01); **B82Y 40/00** (2011.01); **C01B 32/182** (2017.01)

CPC (source: EP US)  
**B01D 67/0083** (2013.01 - EP); **B01D 67/009** (2013.01 - EP); **B01D 69/02** (2013.01 - EP); **B01D 69/06** (2013.01 - EP US); **B01D 71/0211** (2022.08 - EP US); **C01B 32/182** (2017.08 - EP); **C01B 32/194** (2017.08 - EP); **C23C 16/26** (2013.01 - EP US); **C23C 16/44** (2013.01 - US); **C23C 16/56** (2013.01 - EP); **H01B 1/04** (2013.01 - EP US); **B01D 2323/34** (2013.01 - EP); **B01D 2323/345** (2013.01 - EP); **B01D 2325/0283** (2022.08 - EP US); **B01D 2325/02831** (2022.08 - EP)

Citation (search report)  
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• [A] WO 2014159043 A1 20141002 - LOCKHEED CORP [US]  
• [A] US 2015151254 A1 20150604 - PEREZ ISRAEL [US]  
• [A] WO 2013142133 A1 20130926 - LOCKHEED CORP [US]  
• [AP] WO 2015116946 A1 20150806 - LOCKHEED CORP [US]  
• [A] US 2013192461 A1 20130801 - MILLER SETH A [US], et al  
• [A] STEVEN P. KOENIG ET AL: "Selective molecular sieving through porous graphene", NATURE NANOTECHNOLOGY, vol. 7, no. 11, 7 October 2012 (2012-10-07), GB, pages 728 - 732, XP055556434, ISSN: 1748-3387, DOI: 10.1038/nnano.2012.162 & STEVEN P. KOENIG ET AL: "Selective molecular sieving through porous graphene", NATURE NANOTECHNOLOGY, vol. 7, no. 11, 7 October 2012 (2012-10-07), pages 728 - 732, XP055213783, ISSN: 1748-3387, DOI: 10.1038/nnano.2012.162  
• See also references of WO 2017023378A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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CN 201680045782 A 20160414; CN 201680045785 A 20160414; EP 16833429 A 20160414; EP 16833431 A 20160414